DETAILED REMARKS

Office Action (OA) rejected all pending claims under 35 U.S.C. 103(a) as being prima facie obvious over Ouyang et al 10/00 in view of Wieczorek '894, and further in view of Oda '019, Zhang, Crawford, and Yu '951, all of record.

In the present response applicant amends claims to more fully express the present invention and bring forth disclosures which are not rendered obvious by the combinations of prior art documents.

Independent claims 1, 19, and 38 of the application are amended in their scope to apply to extremely thin fully depleted silicon on insulator (SOI) technology. Such amending finds full support in the specification; no new material is being introduced. The specification of the present invention states on page 9, lines 10 to 13: "In an alternate embodiment, for extremely thin fully depleted SOI devices, one could grow the source and drain 10 laterally, from a lateral seeding, in which case the source and drain 10 would penetrate all the way down to the insulating layer 55." To more fully express this embodiment, and since the amended claims admit to drawing representation, applicant added Fig. 1D to the application. Page 3 of this amendment contains the replacement sheet 7/7 of the original application, where new Fig. 1D is drawn. Page 4 of this amendment contains the immediate prior version of sheet 7/7, with the only difference between the two versions being new figure 1D. No changes are made to any of the originally filed figures.

Page 5 of this amendment contains an amended specification paragraph, which in the original application commenced on line 13 of page 8, and ended on line 13 of page 9. The amendment consist of the added phrase: "shown in Fig. 1D". The explanation is self evident, the amendment brings consistency between the specification and the figures.

Applicant again emphasizes that, as stated above, the original specification fully

describes the embodiment depicted on Fig. 1D, and the amended drawing and specification do not represent new matter.

Applicant respectfully submits that the presently claimed embodiment in extremely thin fully depleted SOI technology is not anticipated, nor is rendered obvious by any combination of the prior art made of record. Wieczorek '894 does grow epitaxial source/drain in recessed regions (trenches in Wieczorek '894 nomenclature). However, Wieczorek '894 gives no consideration to extremely thin fully depleted SOI technology, and Wieczorek '894 gives no hint how to use their method to fabricate field effect devices were their trenches penetrate all the way down to an insulating layer which underlies the device. All of the specification and figures of Wieczorek '894 indicate epitaxial deposition which seeds and grows upward from the exposed substrate. When discussing suitable depth for the trenches, for instance, in the last paragraph of column 10, Wieczorek '894 does not drop even a hint of the possibility of penetrating all the way down to an insulating layer of SOI, or what would happen if they did. The recognition of the epitaxial source/drain usefulness for fully depleted thin SOI, and how to fabricate such, occurs only in the present invention. The present disclosure clearly gave the inventive solution, namely, that of growing the source and drain laterally, from a lateral seeding. Lateral seeding and growth allows for the needed extremely precise lineup of the heterojunction with the metallurgical junction for the case when growth from the substrate is not possible. Applicant respectfully asserts that Wieczorek '894 gives no hint, suggestion, or any consideration for an embodiment where crystalline substrate material is not exposed, and is unaware of the possibility of lateral seeding and growth. Since without lateral seeding and growth it is not possible to fabricate field effect devices where the source/drain is epitaxially grown, and extends down to the underlying insulator, the structure in claims 1, 19 and 38 of the present disclosure is novel and non-obvious in view of all cited prior art. Accordingly, applicant respectfully submits that amended claims 1, 19, and 38 are patentable.

In independent claim 19 the conductivity type of the body has been deleted. Since the preamble of claim 19 states PMOS, and furthermore one limitation states that the source and drain are p-type, the scope of the claim is clearly PMOS without specifying any body conductivity type. Claim 38 is amended in a manner to be consistent with claim 1.

The present amendment also cancels some dependent claims. All non-cancelled dependent claims are either original, or are amended only for changed dependency claim number. Applicant respectfully contends that if independent claims 1, 19, and 38 are patentable, then the non-cancelled dependent claims of this amendment, by introducing further limitations, are a fortiori patentable.

CLOSING STATEMENT

Applicant respectfully submits that as expressed in this amendment the application now claims only patentable subject matter.

Applicant further submits that this application is now in condition for allowance, which action is respectfully requested.

Respectfully,

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